



PATENT APPLICATION
PO-7901
LeA 36,290

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF)	
PETER HAAS ET AL)	GROUP NO.: 1711
SERIAL NUMBER: 10/736,164)	
FILED: DECEMBER 15, 2003)	EXAMINER: J. COONEY
TITLE: STABLE POLYOL DISPERSIONS,)	
POLYURETHANE MOLDINGS)	
PRODUCED THEREFROM, AND TO)	
THEIR USE)	

LETTER

Mail Stop - Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 2231-1450

Sir:

Enclosed herewith is an Appeal Brief in the matter of the subject Appeal.
Please charge the fee for filing the Brief, \$500.00, to our Deposit Account Number
13-3848 .

Respectfully submitted

By N. Denise Brown
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Date
N. Denise Brown, Reg. No. 36,097
Name of applicant, assignee or Registered Representative
N. Denise Brown
Signature
February 10, 2006
Date



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APPEAL BRIEF

Mail Stop Appeal Brief Patents
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

This Brief is an appeal from the Final Office Action of the Examiner dated September 22, 2005, in which the rejection of Claims 1-5 was maintained. A Notice of Appeal was filed on December 14, 2005.

I. REAL PARTY IN INTEREST

This application is assigned to Bayer AG.

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Date

N. Denise Brown, Reg. No. 36,097

Name of applicant, assignee or Registered Representative

N. Denise Brown
Signature

February 10, 2006

Date

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II. RELATED APPEALS AND INTERFERENCES

There are no pending appeals or interferences which Appellants' are aware of that may be related to, would directly affect, would be affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

The above-referenced application was filed with Claims 1-5.

Claims 1-5 are pending but stand rejected. Claims 1-5 are the subject claims of this appeal.

IV. STATUS OF AMENDMENTS

No amendments were filed by Appellants' after final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Of pending claims on Appeal, Claim 1 is the only independent Claim. Claims 2-5 are directly dependent on Claim 1. Claim 1 is directed to stable dispersions of polyol formulations. (In order to assist the Honorable Board in its evaluation of the invention, reference will be made to the specification in which "P" will designate a page number and "L" will designate the line number(s)). These stable dispersions comprise: a) a polyol component comprising: a1) one or more polyetherpolyols with an OH number of 350 to 1830 mg KOH/g and a functionality of 2 to 8, and a2) optionally up to 40 wt.%, based on the combined weight of a) and b), of one more polyester polyols with an OH number of 250 to 500 mg KOH/g and a functionality of 2 to 3 (P2, L4-10); b) optionally, one or more polyether polyols with an OH number of 15 to 250 mg KOH/g and a functionality of 2 to 6 (P2, L11-12); and c) one or more release agents comprising: c1) one or more release agents containing ester groups, with the release agents being characterized by an OH number of about 43 to about 53, and comprising the reaction product of: (i) one or more fatty acids having 10 to PO-7901

40 carbon atoms, (ii) optionally, one or more dicarboxylic acids or polycarboxylic acids, and (iii) one or more polyether polyols with an OH number of 200 to 1,000 KOH/g and a functionality of 2 to 6, in which the polyether-polyol is prepared from an initiator selected from the group consisting of 1,4-butanediol, ethylene glycol, 1,6-hexanediol, trimethylol-propane, pentaerythritol, glycerol, sorbitol, bisphenol A and mixtures thereof, and in which up to 50 equivalent percent of the polyether-polyol component may be replaced by other polyols which are free of ethylene oxide and/or propylene oxide units in the molecule (P2, L14-25; P4, L30 through P5, L2; P5, L7-13; in the working examples, see FAPE 3 on P6, L12-16 and FAPE 8 and FAPE 9 on P7, L12-20). In addition, the stable dispersions may optionally, comprise d) water or a mixture thereof with one or more physical blowing agents, e) one or more activators, f) one or more stabilizers, and g) other additives and auxiliary substances (P3, L4-8).

Claim 2 is dependent on Claim 1 and further defines the release agents c1) which contain ester groups. Claim 3, also dependent on Claim 1, is directed to a process for preparation of the stable dispersions. Claim 4 is directed to a cellular polyurethane molding that comprises the reaction product of a polyisocyanate and these stable dispersions, and Claim 5 is directed to a process for the production of cellular polyurethane molding. Claims 4 and 5 are also dependent on Claim 1.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-5 stand rejected under 35 U.S.C. § 112, first paragraph, for failure to comply with the written description requirement.

VII. ARGUMENTS

CLAIMS 1-5 ARE NOT PROPERLY REJECTED UNDER 35 U.S.C. § 112, FIRST PARAGRAPH, FOR FAILURE TO COMPLY WITH THE WRITTEN DESCRIPTION REQUIREMENT.

Appellants respectfully submit that the written description requirement of the first paragraph of 35 U.S.C. § 112 is satisfied by the presently claimed invention.

It is well established that the purpose of the written description requirement of the first paragraph of 35 U.S.C. § 112 is to ensure that Appellants were in possession of the claimed invention at the time the application was filed (i.e. as of the filing date). This requirement is satisfied if the application reasonably conveys this fact to one of ordinary skill in the art.

Appellants respectfully submit that this rejection relates specifically to the one or more release agents defined as component c1) in Claim 1 of the present application. These release agents are described as "containing ester groups" and "being characterized by an OH number of about 43 to about 53". In addition, release agents c1) comprise the reaction product of (i) one or more fatty acids having 10 to 40 carbon atoms, (ii), optionally, one or more dicarboxylic acids or polycarboxylic acids, and (iii) one or more polyether polyols with an OH number of 200 to 1,000 KOH/g and a functionality of 2 to 6, in which the polyetherpolyol is prepared from an initiator selected from the group consisting of 1,4-butanediol, ethylene glycol, 1,6-hexanediol, trimethylol-propane, pentaerythritol, glycerol, sorbitol, bisphenol A and mixtures thereof. This component, i.e. the polyether polyol (iii), may also be substituted with up to 50 equivalent percent of other polyols which are free of ethylene oxide and/or propylene oxide units in the molecule.

It is Appellants position that the working examples provide a written description of the OH number range, i.e. an OH number of about 43 to about 53, in Claim 1. More specifically, FAPE 3, FAPE 8 and FAPE 9 of the working examples in the present specification provide support that Appellants were in possession, at the time of the filing the application, of release agents c1) having an OH number in the range of about 43 to about 53. In particular, Appellants respectfully submit that FAPE 3 is a release agent in accordance with release agents c1) of the presently claimed invention. FAPE 3 comprises the reaction product of 1695 g of oleic acid, 146 g of adipic acid, and 560 g of a polyether polyol with an OH number of 1000 that was prepared by the addition of propylene oxide (PO) onto trimethylolpropane as a starter (see P6, L12-15). It is readily apparent that oleic acid falls within the scope of (i) in c1), adipic acid falls within the scope of (ii) in c1), and the polyether polyol with an OH number of 1000 falls within the scope of (iii) in c1). The reaction product (FAPE 3) has an OH number of 53 and an acid number of 2.5. (See P6, L15-16.)

Thus, FAPE 3 is clear evidence that Appellants were in possession of a release agent c1) which is characterized by an OH number of 53. This essentially corresponds to the presently claimed upper limit of the OH number of about 53 for the release agents c1).

FAPE 8 and FAPE 9 are both reaction products of oleic acid, adipic acid, and a polyether polyol. The polyether polyol in FAPE 8 has an OH number of 600 and is prepared by the addition of ethylene oxide onto trimethylolpropane. FAPE 8 additionally comprises trimethylolpropane as a reactant. The OH number of the resultant product (i.e. FAPE 8) is 43. FAPE 9 uses a polyether polyol having an OH number of 1000 which is prepared by the addition of ethylene oxide onto glycerol. The OH number of FAPE 9 is disclosed as 43. These OH numbers essentially correspond to the lower limit of about 43 for the OH number of the claimed release agents c1). Accordingly, it is respectfully submitted that FAPE 8 and FAPE 9 are clear evidence that Appellants were in possession of release agents characterized by an OH number of 43 at the time the present application was filed.

The remaining FAPes which are representative of the present invention include FAPE 4, FAPE 5, FAPE 6 and FAPE 7. FAPE 4 has an OH number of 44. FAPE 5 has an OH number of 44. FAPE 6 has an OH number of 45, and FAPE 7 has an OH number of 47. FAPE 1 and FAPE 2 are outside the scope of the claimed release agents. One reason is that the OH numbers are outside the presently claimed range of about 43 to about 53. In addition, however, these are outside the scope of the claimed release agents as they do not use a polyether polyol to prepare the resultant fatty acid polyesters. Rather, FAPE 1 uses pentaerythritol and FAPE 2 uses trimethylolpropane.

It is respectfully submitted that present specification reasonably conveys to one of ordinary skill in the art the fact that Appellants were in possession of release agents containing ester groups and characterized by an OH number of about 43 to about 53. The specification on P2, L14-15 and Claim 1 describes release agents c1) as containing ester groups. These were not initially limited to a specific range of OH numbers as in present Claim 1. However, the release agents as originally described in the present specification by the written description on P2, L14-25 were implicitly characterized by a range of OH numbers that is at least as broad as that which

Appellants are presently claiming.

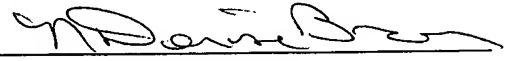
Now, Appellants are relying on working examples which describe the fatty acid polyester ester release agents to more clearly define the range of OH numbers of the release agents c1). The fact that the release agents in the working examples are the reaction product of components (i) one or more fatty acids, (ii) one or more dicarboxylic acids or polycarboxylic acids, and (iii) one or more polyether polyols with an OH number of 200 to 1,000 and a functionality of 2 to 6, as compared to the present claim language in which component (ii), the dicarboxylic acids or polycarboxylic acids, are optional, does not mean that the present specification fails to provide an adequate written description as required by 35 U.S.C. § 112, first paragraph, for the release agents as set forth in Claim 1. It is Appellants' position that the description of release agents c1) as reaction products of components (i), (ii) and (iii) in the working examples and the disclosure of the corresponding OH numbers for the release agents therein makes it readily apparent to one of ordinary skill in the art that the release agents c1) as described on P2, L14-25 of the present specification and in the Claims in which component (ii) is optional, must have an OH number range that is at least as broad as that of the more narrowly defined release agents which comprise the reaction product of components (i), (ii) and (iii). This is a logical conclusion.

Furthermore, OH numbers, like physical properties, are inherent in the presently required release agents c1). It is respectfully submitted that since Appellants were in possession of the release agents, they were also in possession of the OH numbers which characterize these release agents.

The written description of the presently claimed invention as set forth in Appellants' specification provides reasonable assurance to one of ordinary skill in the art that Appellants' were, in fact, in possession of the presently claimed invention as of the filing date. Therefore, Appellants respectfully submit that the written description requirement of 35 U.S.C. § 112, first paragraph, is satisfied by the present specification and claims.

In view of the preceding arguments, Appellants' respectfully submit that the Examiner's rejection is in error and respectfully request that the rejection be reversed. The allowance of Claims 1-5 is respectfully requested.

Respectfully submitted,

By 

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VIII. CLAIMS APPENDIX:

The following is a listing of the claims on Appeal.

Claim 1. Stable dispersions of polyol formulations which comprise:

- a) a polyol component comprising:
 - a1) one or more polyetherpolyols with an OH number of 350 to 1830 mg KOH/g and a functionality of 2 to 8,
 - and
 - a2) optionally up to 40 wt.%, based on the combined weight of a) and b), of one or more polyesterpolyols with an OH number of 250 to 500 mg KOH/g and a functionality of 2 to 3,
- b) optionally, one or more polyetherpolyols with an OH number of 15 to 250 mg KOH/g and a functionality of 2 to 6,
- c) one or more release agents comprising:
 - c1) one or more release agents containing ester groups, said release agent being characterized by an OH number of about 43 to about 53, and comprising the reaction product of:
 - (i) one or more fatty acids having 10 to 40 carbon atoms,
 - (ii) optionally, one or more dicarboxylic acids or polycarboxylic acids,
 - and
 - (iii) one or more polyetherpolyols with an OH number of 200 to 1,000 KOH/g and a functionality of 2 to 6, in which the polyether-polyol is prepared from an initiator selected from the group consisting of 1,4-butanediol, ethylene glycol, 1,6-hexanediol, trimethylol-propane, pentaerythritol, glycerol, sorbitol, bisphenol A and mixtures thereof, and wherein up to 50 equivalent percent of said polyether-polyol component may be replaced by other polyols which are free of ethylene oxide and/or propylene oxide units in the molecule;
 - and, optionally,

- c2) one or more release agents containing amide groups,
- d) optionally, water or a mixture thereof with one or more physical blowing agents,
- e) optionally, one or more activators,
- f) optionally, one or more stabilizers,
- and
- g) optionally, other additives and auxiliary substances.

Claim 2. The stable dispersions of Claim 1, wherein c1) said release agents which contain ester groups comprise the reaction product of:

- (i) one or more fatty acids having 10 to 40 carbon atoms,
- (ii) optionally, one or more dicarboxylic or polycarboxylic acids,
- and
- (iii) one or more polyetherpolyol components with an OH number of 400 to 800 mg KOH/g, and a functionality of 2 to 4.

Claim 3. A process for the preparation of the stable dispersions of Claim 1, comprising (I) mixing components a) through g) together.

Claim 4. A cellular polyurethane molding, comprising the reaction product of:

- A) one or more organic isocyanates,
- and
- B) the stable dispersions of Claim 1.

Claim 5. A process for the production of cellular polyurethane moldings, comprising:

- (I) reacting

- A) one or more organic isocyanates selected from the group consisting of organic polyisocyanates, modified organic polyisocyanates, and organic polyisocyanate prepolymers,
- with
- B) the stable dispersions of polyol formulations of Claim 1.

IX. EVIDENCE APPENDIX:

No evidence has been submitted by Appellants.

X. RELATED PROCEEDINGS APPENDIX:

Appellants' have not identified any applications under Section II, titled "RELATED APPEALS AND INTERFERENCES". Accordingly, there is nothing to submit under this section.